

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Bunker Hill SF site ER - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region X

**Subject:** POLREP #4  
Progresss  
Bunker Hill SF site ER  
  
Smelterville, ID  
Latitude: 47.5469330 Longitude: -116.1645230

**To:** Beth Sheldrake, EPA Region 10  
Calvin Terada, EPA Region 10 (POLREP List)  
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**Date:** 3/13/2019

**Reporting Period:** March 3 through 9, 2019

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	<b>Contract Number:</b>
<b>D.O. Number:</b>	<b>Action Memo Date:</b>
<b>Response Authority:</b> CERCLA	<b>Response Type:</b> Emergency
<b>Response Lead:</b> EPA	<b>Incident Category:</b> Removal Action
<b>NPL Status:</b> NPL	<b>Operable Unit:</b>
<b>Mobilization Date:</b> 2/8/2019	<b>Start Date:</b> 2/9/2019
<b>Demob Date:</b>	<b>Completion Date:</b>
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b>
<b>FPN#:</b>	<b>Reimbursable Account #:</b>

#### 1.1.1 Incident Category

Emergency Response

#### 1.1.2 Site Description

The Bunker Hill Superfund Site (Site) is located in the Coeur d'Alene Basin of Northern Idaho. The Site includes mining-contaminated areas in the Coeur d'Alene River corridor, adjacent floodplains, downstream water bodies, tributaries, and fill areas, as well as the 21-square-mile Bunker Hill "Box," where historical ore-processing and smelting operations occurred. The Site was listed on the National Priorities List (NPL) in 1983 and is assigned CERCLIS identification number IDD048340921. The Site is also known as the Coeur d'Alene Basin Cleanup. EPA has divided the Bunker Hill Superfund Site into three Operational Units (OUs); The OU 1 includes the populated areas of Bunker Hill Box and is where the current Bunker Hill Superfund Site Emergency Response (ER) is located.

##### 1.1.2.1 Location

The location of on-site activities surrounds the Central Impoundment Area (CIA), slurry wall, I-90 subsidence zone, and the seep discharging into the Coeur d'Alene River. EPA and the Corps of Engineers recently completed construction of a subsurface groundwater cutoff wall in this same area, between the site and I-90 and the river. I-90, through this area, was constructed on top of historic mine waste. Groundwater levels are naturally high and there is a direct hydraulic connection between the site and the river. As a result, roadway subsidence and groundwater seeps are not historically uncommon. I-90 is a major east west transportation corridor through northern Idaho and is considered critical infrastructure. Within this area, an array of tasks associated with existing groundwater monitoring wells, new soil test pits, and new groundwater monitoring wells were prioritized.

##### 1.1.2.2 Description of Threat

During EPA Remedial cleanup activities which include the construction of a groundwater cutoff wall and collection system to collect and treat contaminated groundwater, a sediment seep was discovered in the South Fork of the Coeur d'Alene River in the vicinity of the cutoff wall. Additionally, over the course of a few days a subsidence had formed in Interstate 90 near the seep. EPA Remedial program contractors have been investigating the source of the seep. Support from the EPA ER program was requested to provide rapid resources to identify the extent of the issue, assist EPA Remedial Project Managers in characterizing threats of a release of contaminated material to the Coeur d'Alene River, and what impact groundwater extraction wells could help in mitigating these threats.

##### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Region 10 mobilized one OSC to assist the Remedial Program. START and ERRS contractors have also been activated to support the assessment and mitigation.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

During the current PolRep reporting period, the EPA Region 10 Emergency Management Program continued to provide support to the EPA Region 10 Remedial Cleanup Program for the investigation of the situation and to initiate necessary mitigation measures. Details on the response actions performed during this reporting period are summarized below.

#### **2.1.2 Response Actions to Date**

##### **Groundwater Well Data Collection**

Preliminary and final laboratory results from groundwater sampling activities were forwarded to the Remedial program as soon as they were received, and START continued to use Scribe to manage sample information and results.

On Tuesday morning, March 5, START collected a synoptic round of groundwater elevations from 68 site monitoring wells and piezometers along the I-90 and slurry wall corridor.

##### **Geophysical Survey**

The START subcontractor Sage Earth Sciences provided their draft final report with the geophysics data that they collected during their site mobilization.

##### **New Monitoring Wells**

On Sunday and Monday, March 3-4, development was completed for the newly installed monitoring wells CU-01 and CU-02, which were installed on the north side of I-90.

EPA is planning to install one more monitoring well at the site as part of the emergency response. The planned monitoring well - to be named LA-04 - will be screened in the lower aquifer, and it will be located near UA-04 and CU-02 on the north side of Interstate 90 near the seep location. At this location, EPA removed sections of the guardrail to allow access for drilling and the installation of UA-04 and CU-02, and the new deep monitoring well will be installed in the existing guardrail opening before it is repaired.

An ERRS-subcontracted surveyor continued to visit the site periodically to record horizontal (latitude and longitude) and vertical (elevation) coordinates for any newly installed monitoring and extraction wells. Additionally, the surveyor returned to the site on Thursday, March 7, to confirm the river staff gauge elevations.

##### **Extraction Wells and Pump Tests**

On Sunday, March 3, the ERRS subcontractor, H2O Well Services, began to drill and install emergency extraction well PW-1.1, approximately 60 feet east of PW-1. On Wednesday, March 6, after construction of PW-1.1 was completed, some sand and gravel was found in the bottom of the well, and H2O removed as much of it as possible. H2O then began to develop the well while START monitored water quality. During development, the water was very turbid and never dropped below 1,000 NTU. Based on these well development results, EPA stopped developing the well and canceled the pump test, which had been scheduled for Thursday, March 7.

By Friday, March 8, EPA sited a new extraction well (PW-1.5) to the east of PW1.1. Instead of directly drilling with H2O's air rotary rig at this location, Environmental West used their sonic drill rig to advance a borehole at this location. Environmental West was already on site with one sonic rig to install planned monitoring wells for ongoing remedial activities for the US Army Corps of Engineers (USACE) and their contractor, Wood. Environmental West was available to pause that drilling activity to advance the borehole for the emergency extraction well through the START subcontract. START geologists logged the borehole and provided data on the lithology and stratigraphy to EPA and USACE. The data was used to optimize the specifications of PW-1.5 (e.g., size of screen and filter pack, depth of screened interval, etc.), which will be implemented next week during the drilling and construction of PW-1.5 by the ERRS subcontractor, H2O.

##### **Tank Farm and Conveyance Pipeline**

ERRS continued to construct the conveyance pipeline for extracted groundwater. By Monday, March 4, ERRS had extended the conveyance pipeline to the lined pond that feeds the Central Treatment Plant (CTP).

ERRS moved one fractionation (frac) tank to an in-line location along the conveyance pipeline route and installed the necessary fittings and valves to connect it to the pipeline. It was installed in such a way that it could be bypassed if the extracted water contained low solids and turbidity and did not require settling. The settling tank also provided the added feature of a 6-inch "booster" pump to assist with head pressure in the event extraction well pumps were not able to convey water through the approximate 7,400-foot long conveyance line at the desired pumping rate. The settling tank and booster pump can be removed from the conveyance system if they are deemed as unnecessary.

ERRS also continued to install and connect the conveyance pipeline from the PW-2 location south of Interstate 90 and north of the slurry wall to the settling tank location. The ERRS subcontractor was back on site to fuse-weld sections of 10-inch HDPE pipe to complete the conveyance pipeline through this area.

ERRS installed new features in the conveyance pipeline, including a T-joint and valves for emergency discharge at the drainage ditch, and vents and sampling ports. By Friday, March 8, the conveyance pipeline was completed from PW-2 to the lined pond south of the Central Impoundment Area (CIA), a length of approximately 7,400 feet.

ERRS received pumps and generators for two extraction wells (PW-2 and the planned PW-1.5), and ordered two more pumps for future use. ERRS installed and plumbed the pump at PW-2 to the conveyance pipeline and began pumping water to the settling frac tank on Friday, March 8. On Saturday, March 9, ERRS performed a "shakedown" test of the groundwater extraction and conveyance system from PW-2, with the extracted water discharged to the drainage ditch.

ERRS began to decontaminate and demobilize the additional frac tanks that were no longer needed. By Friday, March 8, four of the frac tanks were decontaminated and off rent.

#### **Emergency Discharge of Extracted Groundwater**

EPA continued to manage extracted groundwater in accordance with the Water Management and Emergency Discharge Contingency Plan that was prepared for the site.

During this reporting period, ERRS continued to construct the conveyance pipeline from extraction well PW-2 to the lined pond. Decontamination water from the frac tanks and water from the pumping system shakedown test on Saturday, March 9, were discharged to the drainage ditch discharge point. During discharge, ERRS and START monitored the ditch for signs of water flow towards Bunker Creek, but no flow was observed as the discharged water infiltrated into the ground at the discharge point.

#### **Site Logistics**

EPA met with representatives of the USACE and their contractor, Wood, to discuss planned USACE/Wood remedial construction activities through the extraction well and slurry wall area between Interstate 90 and the CIA, including the installation of monitoring and extraction wells and the construction of a new road. The coordination meeting and site walk was conducted to ensure coordination between the ongoing emergency response and planned remedial activities.

ERRS also upgraded and improved the existing crossing between the support zone and the extraction well zone at the northwest corner of the CIA.

EPA coordinated with Idaho Transportation Department (ITD) to schedule lane closures when crews needed access to roadside shoulders and lanes of traffic for monitoring well drilling and other site activities.

### **2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

The Bunker Hill site is a current NPL site. Previous Known PRPs include:

Bunker Hill Mining Corporation  
Placer Mining Corporation  
Liberty Silver Corporation  
Gulf Resources & Chemical Corporation  
Pintlar Corporation  
ASARCO, Inc.  
Government Gulch Mining Company, Ltd,  
Federal Mining and Smelting Company  
Hecla Mining Company  
Sunshine Mining Company  
Callahan Mining Corporation  
Union Pacific Railroad Company

## **2.2 Planning Section**

### **2.2.1 Anticipated Activities**

The EPA Region 10 Emergency Management Program will continue to support the EPA Remedial Program in the investigation of the situation and initiation of mitigation measures.

#### **2.2.1.1 Planned Response Activities**

##### **2.2.1.2 Next Steps**

Drill and install extraction well PW-1.5 at a location to the east of PW-1.1.

Install a new deep monitoring well - LA-04 - on the north side of Interstate 90 near monitoring wells UA-04 and CU-02.

Plan for a pump test of PW-1.5 on Saturday, March Wednesday, March 6, depending on the results of well installation and development.

Finalize construction of conveyance system including establishing connections to all four EPA-installed extraction wells, locating flow meters and sample ports at locations provided by EPA Remedial program managers, and confirming the volume capacity of the booster pump,

Perform a final round of groundwater sampling from selected monitoring wells.

Plan for the transition from the emergency response phase to ongoing monitoring and remedial activities.

#### **2.2.2 Issues**

## **2.3 Logistics Section**

No information available at this time.

## **2.4 Finance Section**

**Estimated Costs \***

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$600,000.00	\$300,000.00	\$300,000.00	50.00%
TAT/START	\$400,000.00	\$300,000.00	\$100,000.00	25.00%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$1,000,000.00	\$600,000.00	\$400,000.00	40.00%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff****2.5.1 Safety Officer****2.5.2 Liaison Officer****2.5.3 Information Officer**

Mark MacIntyre

**3. Participating Entities****3.1 Unified Command****3.2 Cooperating Agencies**

USEPA

USACE

IDEQ

ITD

**4. Personnel On Site**

EPA

USACE

IDEQ

IDOT

START

ERRS

Jacobs

Environmental West Exploration

H2O

Sage Earth Sciences

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.